Lesson Plan

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5th Grade Math

**Standard**: M05.A-T.1.1 Demonstrate understanding of place value of whole numbers and decimals, and compare quantities or magnitudes of numbers.

**Practice Standard**: 5. Use appropriate tools strategically

**What visual(s) will you use?**

* Base ten blocks, graph paper, dry erase marker

**Activity designed around visual – Are you adapting an activity you experienced today?** This is not from an activity from today.

**How?**

The teacher will introduce the students to the concept of whole number place value using base ten blocks.

The format will be:

Thousands, Hundreds, Tens, Ones . Tenths, Hundredths, Thousandths

This lesson will introduce the concept of tenths using a base ten block (rod) with one block shaded in with a dry erase marker to represent a tenth of a unit. The base ten blocks represent one whole, and the shaded part of the base ten blocks will represent a part of a whole.

The lesson will continue with a flat hundred block with one block shaded in with a dry erase marker to represent a hundredth of a unit. The students will be asked to come to the front of the classroom to shade in various amounts such as 3/10, 7/10, 27/100, 62/100, etc… given by the teacher to demonstrate their knowledge of tenths and hundredths using the dry erase markers and base ten blocks.

Next, the students will be given graph paper with black outlines of predetermined ten rods and hundred flat pieces to show their ability to shade in fractional amounts for tenths and hundredths. The teacher will present a series of fractions and decimals on the board at the front of the room. The students will shade the areas of the rods and flat hundred pieces independently. During this time, the teacher will demonstrate how to write fractions as decimals using tenths and hundredths. The students will be asked to write a decimal for each of the pictures they have previously shaded representing tenths and hundredths. At the end of the teacher directed examples, the class will discuss the activity.

The students will be given a teacher-created worksheet near the end of the class as homework so that they may continue to practice demonstrating their knowledge of the concept of place-value of whole numbers and decimals by shading in parts of the base ten rods and hundred pieces on graph paper to represent fractions in tenths and hundredths. The students will also be asked to change fractions into decimals in writing and vice versa.

In order to extend this activity, the teacher will conduct a similar lesson on thousandths using the shaded units on the large cube base ten block.

**What questions you will ask as students are engaged in the activity to surface the mathematics?**

I would ask questions such as:

“How does this drawing of a fraction relate to the written fraction?”

“How do the drawings and written fractions relate to the written decimal?”

“How does shading in two units on a tens rod make sense when the fraction states 2/10?”

“Can you explain your thinking and how you arrived at your answer of a written decimal of \_\_\_\_ if you started with 3 shaded units on a flat hundred piece?”

**Extending Math into Social Studies:**

When discussing the lesson of stock, shares of ownership in a company, I have incorporated the base ten blocks into the social studies lesson.

The teacher begins by showing a flat hundred piece of a base ten block. “What shape is this?” The students respond by stating, “a square.” Then the teacher tells the students that this is the company, “the orange square company.” I had four students in the classroom and I showed them that the flat hundred block could be divided into smaller pieces (the tens rods). I started passing out two rods to each of the four students and then I kept two rods for myself. I explained that we each had a share of the company by having the (rods). This lesson was an easy and effective way to demonstrate the social studies concept using a visual and manipulative in the classroom.